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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/553,572
Filing Date: October 23, 2006
Appellant(s): MAZIERS ET AL.

Tenley R. Krueger
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 09, 2011 appealing from the Office action mailed September 09, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 9 – 15

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

WITHDRAWN REJECTIONS

There are no rejection withdrawals.

NEW GROUND(S) OF REJECTION

There are no new grounds of rejection.

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

US 5,278,272	LAI	01-1994
US 5,861,202	KIMURA	01-1999
US 5,451,450	ERDERLY	09-1995

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 9 and 10 are rejected under 35 U. S. C. 102(b) as being unpatentable over Lai et al. US patent No 5,728,272.

Considering claims 9 and 10, Lai et al. teaches elastic substantially linear olefin polymers which have very good processability comprising ethylene homopolymers, wherein the polymer backbone is substituted with about 0.01 long chain branches/1000

carbons to about 3 long chain branches/1000 carbons, more preferably from about 0.01 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons, and especially from about 0.05 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons (Abstract and Col. 3, lines 58-64). Thus, these materials have long chain branching as claimed.

The materials taught by Lai et al are "substantially linear", so while they are somewhat linear, they do have a small amount of "long chain branching"; hence the use of the term "substantially."

Furthermore, Lai et al. teaches that the density of the said ethylene substantially linear olefin polymers is measured in accordance with ASTM D-792 and is generally up to about 0.97 g/cm.sup3, which is considered to be medium to high density polyethylene resins (Col. 4, lines 53-58).

Moreover, Lai et al. teaches that the substantially linear olefin polymers are made using constrained geometry catalyst polymerization, wherein said catalysts are considered to be in the family of metallocene catalysts, as it is considered by Appellant in the disclosure.

Regarding claim 10, tetrahydroindenyl is included among the examples of constrained geometry catalysts taught by Lai et al. (Col. 9, lines 10-15).

Furthermore, Lai et al. teaches that among the useful articles made from the olefin polymers by using all of the conventional polyolefin processing techniques, there are films e.g., cast, blown and extrusion coated, fibers e.g., staple fibers, spunbound

fibers or melt blown fibers and gel spun fibers, spunlaced fabrics or structures made from such fibers and molded articles (Col. 15, lines 21-30).

Therefore, Lai et al. anticipates all limitations in the instant claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9 - 12, and 14 are rejected under 103 (a) as being unpatentable over Kimura et al. US patent No 5,861,202 in view of Lai et al. US patent No 5,728,272.

Considering claims 9 - 12 and 14, Kimura et al. teaches a laminated body comprising a uniaxially stretched laminate composed of (I) a first thermoplastic resin layer and (II) an adhesion layer which has a lower melting point than said first thermoplastic resin layer (I) (Abstract). The resins usable as the first thermoplastic resin layer (I) in Kimura et al.'s laminate are crystalline thermoplastic resins having stretchability and include crystalline and stretchable resins. Kimura et al. also teaches that ethylene homopolymer having a density of 0.94 to 0.98 g/cm.sup.3, considered to

be medium to high density polymer, and an ethylene-based polymer such as a copolymer of mainly ethylene with other .alpha.-olefins are among the preferred resins for layer (I)(Col. 3, lines 35-49).

Moreover, Kimura et al. also teaches the use of metallocene and constrained geometry catalyst comprising a cyclopentadienyl skeleton for manufacturing the polymers used in the laminated (Col. 4, lines 23-31).

Furthermore, Kimura et al. teaches that the laminated is capable of enhancing the adhesion strength between the longitudinally and laterally split tapes of said laminated body and fabric and are excellent in low-temperature heat sealability (Col. 2, lines 18-21).

Kimura et al. does not specifically recite that first thermoplastic polyethylene resin in layer (I) is polyethylene resin having long chain branches.

Lai et al. teaches elastic substantially linear olefin polymers which have very good processability comprising ethylene homopolymers, wherein the polymer backbone is substituted with about 0.01 long chain branches/1000 carbons to about 3 long chain branches/1000 carbons, more preferably from about 0.01 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons, and especially from about 0.05 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons (Abstract and Col. 3, lines 58-64).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the linear olefin polymers having long branches taught by Lai et al. to make the uniaxially stretched laminate of Kimura et al. when it is desired to

provide the polymer with good processability. The specific temperature range and the ratio of the roller's velocity in the stretching step would be a result effective variable related to the final application of the polymeric article been made and the specific equipment used in the manufacturing of said article.

Claims 13 and 15 are rejected under 103 (a) as being unpatentable over Kimura et al. US Patent No 5,861,202 in view of Lai et al. US Patent No 5,728,272 and further in view of Erderly et al. US Patent No 5,451,450.

Considering claims 13 and 15, Kimura et al. in view of Lai et al. is relied upon as set forth above in the 103 rejection of claim 11.

Kimura et al. in view of Lai et al. does not recognize the step of annealing the polyethylene film or tape following the stretching step.

Erderly et al. teaches elastic materials made from metallocene catalysts. Such materials are produced by conventional blown or cast film processes, as well as cast embossed. Thus, eliminating costly post extrusion or compounding steps (Col. 2, lines 47-50).

In a preferred embodiment, Erderly et al. teaches that the polyethylene film is annealed at a temperature between the film softening point and melting point. The annealing step is necessary to anneal or perfect the crystallites that survived the orienting step and to relax out stresses. This annealing aids in maintaining the orientation or extension induced in the orienting step. The annealing temperature is

preferably less than the orienting temperature. Generally once the film leaves the annealing step, ambient cooling is sufficient. In most cases, the film from the annealing step is then spooled in a winding unit (Col. 9, lines 64 68 and Col. 10, lines 1-6).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the annealing step taught by Erderly et al. into the Kimura et al. in view of Lai et al. filament or film making process when it is desired to maintain the orientation or extension induced in the stretching step. The specific temperature range would be a result effective variable related to the final application of the polymeric article been made. This is especially true as the materials taught by Kimura et al. are heat sealed together and heat setting would make the materials more dimensionally stable during the sealing process.

(10) Response to Argument

The main issue under consideration is the structure of the polymer taught by Lai et al.

The Appellants acknowledge that “Lai teaches that substantially linear polymer may include a limited number of limited long chain branches” The Appellants claims are directed to structures made from "long chain branched metallocene-produced polyethylene," and states that this is different from the materials taught by Lai et al. The Examiner respectfully argues the contrary:

The limitation "long chain branched metallocene produced polyethylene" is given its broadest reasonable interpretation.

Regarding the term "long chain branched," Lai et al. teaches elastic substantially linear olefin polymers, described as having very good processability, and comprising ethylene homopolymers, wherein the polymer backbone is substituted with about 0.01 long chain branches/1000 carbons to about 3 long chain branches/1000 carbons, more preferably from about 0.01 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons, and especially from about 0.05 long chain branches/1000 carbons to about 1 long chain branches/1000 carbons (Abstract and Col. 3, lines 58-64). While the materials have a limited amount of long chain branching, they clearly have long chain branches as claimed.

Appellant has not set forth a degree of branching for the claimed polymer as requirement in the claimed article. Therefore, the polymers taught by Lai, even though they are described as being substantially linear; they have "long chain branching" and thus meet the limitations for the polyethylene resin to be of long chain, branched.

Regarding the limitation that the resins are "metallocene produced," the Lai et al reference uses homogeneous catalysts which have ligands of the type claimed for example "tetrahydroindenyl" as in claim 10. For these reasons the examiner believes that the resins taught by Lai et al. meet the material as claimed.

As Lai et al. teaches that the polymers can be made into textile components of the type claimed, the claims as set forth are anticipated.

Regarding Appellant's arguments with respect to the 103 rejection of claims 9 – 12 and 14 over Kimura et al. in view of Lai et al., stating that Lai does not provide the

missing elements in the disclosure of Kimura, the Examiner respectfully argues the contrary for the same reason set forth above.

Regarding Appellant's arguments with respect to the 103 rejection of claims 13 and 15 over Kimura et al. in view of Lai et al. and further in view of Erderly et al., stating that Erderly does not supply the features absent from Kimura and Lai., the Examiner respectfully argues the contrary for the same reason set forth above.

Having addressed all arguments regarding independent claim 9 and its dependent claims 10 – 15, the Examiner believes that the rejections should be sustained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/REL/
Ricardo E. Lopez, Patent Examiner, Art Unit 1786
March 15, 2011

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